

September 21, 2004

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
11555 Rockville Pike,  
Rockville, Maryland 20852

Subject: Duke Energy Corporation  
McGuire Nuclear Station Units 1 & 2  
Docket Nos. 50-369, 370  
Catawba Nuclear Station Units 1 & 2  
Docket Nos. 50-413, 414  
Oconee Nuclear Stations Units 1, 2 & 3  
Docket Nos. 50-269, 270, 287  
Supplement to Response to NRC BULLETIN 2004-01: INSPECTION OF ALLOY  
82/182/600 MATERIALS USED IN THE FABRICATION OF PRESSURIZER  
PENETRATIONS AND STEAM SPACE PIPING CONNECTIONS AT  
PRESSURIZED-WATER REACTORS

Pursuant to 10 CFR 50.54(f), this letter and the Enclosure supplements Duke Energy Corporation's (Duke) response to NRC Bulletin 2004-01 for the McGuire, Catawba and Oconee Nuclear Stations provided by letter dated July 27, 2004. The questions enclosed in Attachment 1 were provided by the NRC staff in a teleconference with Duke and on August 25, 2004. The questions provided during the teleconference were specific to Catawba Nuclear Station; however, the response attached is applicable to Oconee and McGuire Nuclear Stations as well as Catawba. The staff requested a response from Duke within 30 days from the date of the teleconference.

The following regulatory commitment is being made by Duke in this submittal:

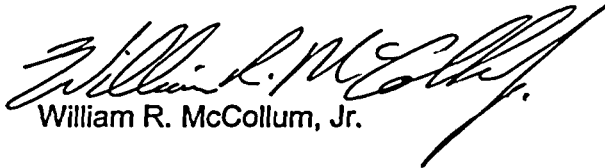
"If circumferential cracking is observed in either the pressure boundary or non-pressure boundary portions of any locations covered under the scope of this bulletin, Duke will develop plans to perform an adequate extent-of-condition evaluation and Duke will discuss those plans with cognizant NRC technical staff prior to restarting the affected unit."

A110

U.S. NRC  
September 21, 2004  
Page 2

If you have questions or need additional information, please contact Mary H. Hazeltine at (704) 382-5880.

Very truly yours,



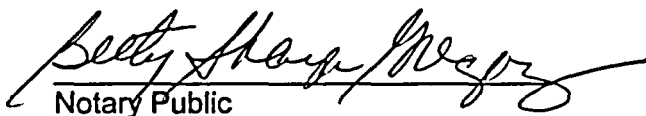
William R. McCollum, Jr.

Enclosure

William R. McCollum, Jr. affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.

  
VP, Nuclear Support

Subscribed and sworn to me: September 21, 2004  
Date

  
Notary Public

My Commission Expires: 3/9/2009  
Date

SEAL



xc: W.D. Travers  
U.S. Nuclear Regulatory Commission Regional Administrator  
Region II Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, GA 30303

J.J. Shea Project Manager  
NRC Senior Project Manager (MNS)  
U.S. Nuclear Regulatory Commission  
Mail Stop O-7 D11  
Washington, DC 20555-0001

S. E. Peterson  
NRC Senior Project Manager (CNS)  
U.S. Nuclear Regulatory Commission  
Mail Stop O-8 G9  
Washington, DC 20555-0001

L. N. Olshan  
NRC Project Manager (ONS)  
U.S. Nuclear Regulatory Commission  
Mail Stop O-8 H12  
Washington, DC 20555-0001

J. B. Brady  
Senior Resident Inspector (MNS)

E. F. Guthrie  
Senior Resident Inspector (CNS)

M. C. Shannon  
Senior Resident Inspector (ONS)

1. **Your response to Bulletin 2004-01 Question (1)(c) did not clearly communicate your intentions with respect to ensuring that an appropriate dialogue would be established with NRC technical staff in the event that circumferential primary water stress corrosion cracking (PWSCC) is identified at any locations covered under the scope of Bulletin 2004-01. The NRC staff addressed this issue, in part, on page 5 of Bulletin 2004-01 stating, "... the NRC staff believes that the topic of NDE scope expansion should be discussed with the NRC if circumferential PWSCC is observed in either the pressure boundary or non-pressure boundary portions of any locations covered under the scope of this bulletin to ensure that the licensee has performed an adequate extent-of- condition evaluation."**

**Because of the potential plant-specific and generic significance of circumferential PWSCC at locations covered under the scope of Bulletin 2004-01, it is the NRC staff's position that cognizant members of the Office of Nuclear Reactor Regulation's Materials and Chemical Engineering Branch (EMCB) should be promptly made aware of any emerging issue regarding this degradation phenomena at your facility. This is important not only for the reason cited in the passage above from Bulletin 2004-01, but also so that the NRC staff can evaluate any such information and fulfill its obligation to inform other U.S. nuclear power plant licensees of new operational experience which may be relevant to the continued safe operation of their facilities.**

**It is the NRC staff's expectation that if you obtain inspection results in the future which indicate that circumferential PWSCC may be occurring at any location covered under the scope of Bulletin 2004-01, you should contact your NRC Headquarters Project Manager (PM) and request a teleconference or meeting with EMCB technical staff. Notification of your NRC PM should allow ample time for you to incorporate any insights from the aforementioned teleconference or meeting into your plans for evaluating the extent of condition at your facility prior to the end of the outage during which the degradation was discovered.**

**In order to document your intent to follow the guidance provided above, please provide a supplement to your Bulletin 2004-01 item (1)(c) response which states:**

**"If circumferential cracking is observed in either the pressure boundary or non- pressure boundary portions of any locations covered under the scope of this bulletin, [we] will develop plans to perform an adequate extent-of-condition evaluation and [we] will discuss those plans with cognizant NRC technical staff prior to restarting the affected unit."**

**Duke Power supplements the previously provided response to item 1(c) of Bulletin 2004-01 for Catawba, McGuire, and Oconee Nuclear Stations as follows:**

**"If circumferential cracking is observed in either the pressure boundary or non- pressure boundary portions of any locations covered under the scope of this bulletin, Duke will develop plans to perform an adequate extent-of-condition evaluation and Duke will**

discuss those plans with cognizant NRC technical staff prior to restarting the affected unit."

2. **Item 1(c) in Bulletin 2004-01 states in part, "Provide your plans for expansion of the scope of NDE to be performed if circumferential flaws are found in any portion of the leaking pressurizer penetrations or steam space piping connections." In accordance with this request the Licensee should provide a statement that, where evidence of apparent reactor coolant pressure boundary leakage is discovered by visual examination, NDE capable of determining crack orientation will be performed in order to accurately characterize the flaw, its orientation and its extent.**

Duke stated in its responses to item 1(c) of Bulletin 2004-01 for Catawba, McGuire, and Oconee Nuclear Stations that engineering will evaluate evidence of leakage to determine cause and extent of condition. The Duke Corrective Action Program will be utilized to evaluate the need for additional NDE methods and increased inspection scopes, including like locations and other Duke units. These actions will ensure detection of unsafe conditions and the appropriate response to the discovery of circumferential cracking.

The purpose of the engineering evaluation is to determine the source of any reactor coolant leakage, the effects of the leakage on surrounding equipment, the root cause of the leakage, and the extent that the condition applies to other locations or components. NDE is one method used to gather data pertinent to root cause investigations and extent of condition determinations. Where evidence of reactor coolant pressure boundary leakage is discovered by visual examination, NDE is utilized to the extent possible to characterize the flaw, including orientation and extent. However, obstructions to NDE examinations may reduce the meaningfulness of examination results. Such obstructions may include complex geometric configurations, piping sizes less than those optimally suited for volumetric inspection methods, or obstruction due to supports or plant structural components. NDE, including surface and volumetric NDE, will be used whenever possible, but its application must be considered on a case specific basis dependent on the anticipated quality and meaningfulness of the examination results.

The Duke Corrective Action Program requires that the actions taken are commensurate with the significance of the situation such that conditions adverse to quality are investigated and corrected. Leakage through the reactor coolant pressure boundary due to the degradation of Alloy 600/82/182 materials is considered a condition adverse to quality. The Corrective Action Program requires management oversight of the activities used to evaluate conditions adverse to quality and the actions taken to correct them.

3. **Item 1(c) in Bulletin 2004-01 requires that the licensee provide the basis for concluding that their plant will satisfy applicable regulatory requirements related to the structural and leakage integrity of pressurizer penetrations and steam space piping connections. Please supplement your response to provide this basis.**

The basis for concluding that the plant will satisfy applicable regulatory requirements is provided by evaluations conducted within the Corrective Action Program. The purpose

Duke Energy Letter dated September 21, 2004

of the Duke Corrective Action Program is to assure that conditions adverse to quality are identified and corrected. In the case of significant conditions adverse to quality, such as the malfunction of QA 1 structures, systems, and components, the Corrective Action Program requires formal evaluation of the cause of the failure and development of corrective action, as defined by 10CFR Part 50, Appendix B. The Corrective Action Program assures that the cause of conditions adverse to quality and the corrective actions taken are documented and reported to the appropriate levels of management. Further, the actions taken to detect and correct conditions adverse to quality are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, and criteria. Administrative programs and technical procedures assure that the plant is inspected and the design basis is maintained, as well as meeting applicable general design criteria to reduce the probability of abnormal leakage or minimize gross rupture of the reactor coolant pressure boundary.